

WHAT IS CLAIMED IS:

1           1. A ball screw device comprising:  
2           a screw shaft of which an outer peripheral surface is  
3           formed with a helical screw groove;  
4           a nut of which an inner peripheral surface is formed with  
5           a helical screw groove corresponding to the helical screw  
6           groove of said screw shaft;  
7           a helical circulation path defined by the two helical  
8           screw grooves;  
9           a multiplicity of balls so disposed in said helical  
10          circulation path as to be capable of rolling; and  
11          a plurality of spacers,  
12          wherein each spacer is disposed between two adjacent  
13          balls and has two concave surfaces facing respectively to said  
14          two balls, and  
15          a section of each of the concave surfaces of at least one  
16          spacer is shaped such that a central portion is rectilinearly  
17          connected to an outer edge of the spacer.

1           2. A linear motion device comprising:  
2           an outer member;  
3           an inner member facing said outer member via a gap;

4 a multiplicity of balls disposed between said outer  
5 member and said inner member; and  
6 a spacer interposed between adjacent balls,  
7 wherein said spacer has concave surfaces with which said  
8 adjacent balls come into line contact.

1 3. A linear motion device comprising:  
2 an outer member;  
3 an inner member facing said outer member via a gap;  
4 a multiplicity of balls disposed between said outer  
5 member and said inner member; and  
6 a spacer interposed between adjacent balls,  
7 wherein said spacer has at least three spaced portions  
8 with which said adjacent balls come into contact.